Listing of the Claims

This listing of claims will replace all prior versions, and listings of claims in the application.

1 - 64. (Canceled)

65. (Previously presented) A nucleic acid ladder comprising a plurality of nucleic acid fragments that exhibit substantially equal intensity after said ladder is separated by gel electrophoresis and stained with a detectable label, wherein said plurality comprises at least two fragments having a size of between 1 kb and 25 kb, and wherein said plurality comprises at least two fragments having a size less than 1 kb.

66. (Previously presented) The nucleic acid ladder of claim 65, wherein said plurality ranges in size from 4kb to 500bp.

67. (Previously presented) The nucleic acid ladder of claim 65, wherein said plurality ranges in size from 5kb to 400bp.

68. (Previously presented) The nucleic acid ladder of claim 65, wherein said plurality ranges in size from 5kb to 300bp.

69. (Previously presented) The nucleic acid ladder of claim 65, wherein said plurality ranges in size from 5kb to 200bp.

70. (Previously presented) The nucleic acid ladder of claim 65, wherein said plurality ranges in size from 5kb to 100bp.

71. (Previously presented) The nucleic acid ladder of claim 65, wherein said plurality ranges in size from 10kb to 400bp.

72. (Previously presented) The nucleic acid ladder of claim 65, wherein said plurality ranges in size from 8kb to 400bp.

73. (Previously presented) The nucleic acid ladder of claim 65, wherein said plurality ranges in size from 6kb to 400bp.

74. (Previously presented) The nucleic acid ladder of claim 65, wherein said plurality comprises at least 3 fragments having a size greater than 1 kb, and wherein said plurality comprises at least 3 fragments having a size less than 1 kb.

75. (Previously presented) The nucleic acid ladder of claim 65, wherein said plurality comprises at least 3 fragments having a size greater than 1 kb, and wherein said plurality comprises at least 4 fragments having a size less than 1 kb.

76. (Previously presented) The nucleic acid ladder of claim 65, wherein said plurality comprises at least 3 fragments having a size greater than 1 kb, and wherein said plurality comprises at least 5 fragments having a size less than 1 kb.

77. (Previously presented) The nucleic acid ladder of claim 65, wherein said plurality comprises at least 4 fragments having a size greater than 1 kb, and wherein said plurality comprises at least 3 fragments having a size less than 1 kb.

78. (Previously presented) The nucleic acid ladder of claim 65, wherein said plurality comprises at least 5 fragments having a greater size than 1 kb, and wherein said plurality comprises at least 3 fragments having a size less than 1 kb.

79. (Previously presented) The nucleic acid ladder of claim 65, wherein said plurality comprises at least 4 fragments having a size greater than 1 kb, and wherein said plurality comprises at least 4 fragments having a size less than 1 kb.

80. (Previously presented) The nucleic acid ladder of claim 65, wherein said plurality comprises at least 5 fragments having a size greater than 1 kb, and wherein said plurality comprises at least 5 fragments having a size less than 1 kb.

81. (Previously presented) The nucleic acid ladder of claim 65, wherein said detectable label is ethidium bromide.

82. (Previously Presented) The nucleic acid ladder of claim 65, wherein said detectable label is SYBR green.

83. (Previously Presented) The nucleic acid ladder of claim 65, further comprising a dye.

84. (Previously presented) The nucleic acid ladder of claim 83, wherein said dye is selected from the group consisting of bromophenol blue, xylene green, and mixtures thereof.

85. (Currently amended) A nucleic acid ladder comprising a plurality of nucleic acid fragments having ~~substantially equal relative mass~~ a size in base pairs, wherein the relative mass of the nucleic acid fragemnts of each size, measured in base pairs, is substantially equal, wherein said plurality comprises at least two fragments having a size greater than 1 kb, and wherein said plurality comprises at least two fragments having a size less than 1 kb.

86. (Previously presented) The nucleic acid ladder of claim 85, wherein said plurality ranges in size from 4kb to 500bp.

87. (Previously presented) The nucleic acid ladder of claim 85, wherein said plurality ranges in size from 5kb to 400bp.

88. (Previously presented) The nucleic acid ladder of claim 85, wherein said plurality ranges in size from 5kb to 300bp.

89. (Previously presented) The nucleic acid ladder of claim 85, wherein said plurality ranges in size from 5kb to 200bp.

90. (Previously presented) The nucleic acid ladder of claim 85, wherein said plurality ranges in size from 5kb to 100bp.

91. (Previously presented) The nucleic acid ladder of claim 85, wherein said plurality ranges in size from 10kb to 400bp.

92. (Previously presented) The nucleic acid ladder of claim 85, wherein said plurality ranges in size from 8kb to 400bp.

93. (Previously presented) The nucleic acid ladder of claim 85, wherein said plurality ranges in size from 6kb to 400bp.

94. (Previously presented) The nucleic acid ladder of claim 85, wherein said plurality comprises at least 3 fragments having a size greater than 1 kb, and wherein said plurality comprises at least 3 fragments having a size less than 1 kb.

95. (Previously presented) The nucleic acid ladder of claim 85, wherein said plurality comprises at least 3 fragments having a size greater than 1 kb, and wherein said plurality comprises at least 4 fragments having a size less than 1 kb.

96. (Previously presented) The nucleic acid ladder of claim 85, wherein said plurality comprises at least 3 fragments having a size greater than 1 kb, and wherein said plurality comprises at least 5 fragments having a size less than 1 kb.

97. (Previously presented) The nucleic acid ladder of claim 85, wherein said plurality comprises at least 4 fragments having a size greater than 1 kb, and wherein said plurality comprises at least 3 fragments having a size less than 1 kb.

98. (Previously presented) The nucleic acid ladder of claim 85, wherein said plurality comprises at least 5 fragments having a size greater than 1 kb, and wherein said plurality comprises at least 3 fragments having a size less than 1 kb.

99. (Previously presented) The nucleic acid ladder of claim 85, wherein said plurality comprises at least 4 fragments having a size greater than 1 kb, and wherein said plurality comprises at least 4 fragments having a size less than 1 kb.

100. (Previously presented) The nucleic acid ladder of claim 85, wherein said plurality comprises at least 5 fragments having a size greater than 1 kb, and wherein said plurality comprises at least 5 fragments having a size less than 1 kb.

101. (Currently amended) The nucleic acid ladder of claim 85, wherein ~~said detectable label is ethidium bromide~~ said plurality of nucleic acid fragments are stained with a detectable label.

102. (Currently amended) The nucleic acid ladder of claim ~~85~~ 101, wherein said detectable label is SYBR green.

103. (Currently amended) The nucleic acid ladder of claim ~~85~~ 101, ~~further comprising a dye~~ wherein said detectable label is ethidium bromide.

104. (Currently amended) The nucleic acid ladder of claim ~~103~~ 85, further comprising a dye ~~wherein said dye is selected from the group consisting of bromophenol blue, xylene green, and mixtures thereof~~.

105. (Currently amended) A nucleic acid ladder comprising a plurality of sizes of nucleic acid fragments, wherein the copy number of ~~said~~ each fragment~~s~~ size is such that the total mass of ~~said~~ each fragment~~s~~ size is substantially ~~equivalent~~ equal, wherein said plurality comprises at least two fragments having a size greater than 1 kb, and wherein said plurality comprises at least two fragments having a size less than 1 kb.

106. (Previously presented) The nucleic acid ladder of claim 105, wherein said plurality ranges in size from 4kb to 500bp.

107. (Previously presented) The nucleic acid ladder of claim 105, wherein said plurality ranges in size from 5kb to 400bp.

108. (Previously presented) The nucleic acid ladder of claim 105, wherein said plurality ranges in size from 5kb to 300bp.

109. (Previously presented) The nucleic acid ladder of claim 105, wherein said plurality ranges in size from 5kb to 200bp.

110. (Previously presented) The nucleic acid ladder of claim 105, wherein said plurality ranges in size from 5kb to 100bp.

111. (Previously presented) The nucleic acid ladder of claim 105, wherein said plurality ranges in size from 10kb to 400bp.

112. (Previously presented) The nucleic acid ladder of claim 105, wherein said plurality ranges in size from 8kb to 400bp.

113. (Previously presented) The nucleic acid ladder of claim 105, wherein said plurality ranges in size from 6kb to 400bp.

114. (Previously presented) The nucleic acid ladder of claim 105, wherein said plurality comprises at least 3 fragments having a size greater than 1 kb, and wherein said plurality comprises at least 3 fragments having a size less than 1 kb.

115. (Previously presented) The nucleic acid ladder of claim 105, wherein said plurality comprises at least 3 fragments having a size greater than 1 kb, and wherein said plurality comprises at least 4 fragments having a size less than 1 kb.

116. (Previously presented) The nucleic acid ladder of claim 105, wherein said plurality comprises at least 3 fragments having a size greater than 1 kb, and wherein said plurality comprises at least 5 fragments having a size less than 1 kb.

117. (Previously presented) The nucleic acid ladder of claim 105, wherein said plurality comprises at least 4 fragments having a size greater than 1 kb, and wherein said plurality comprises at least 3 fragments having a size less than 1 kb.

118. (Previously presented) The nucleic acid ladder of claim 105, wherein said plurality comprises at least 5 fragments having a size greater than 1 kb, and wherein said plurality comprises at least 3 fragments having a size less than 1 kb.

119. (Previously presented) The nucleic acid ladder of claim 105, wherein said plurality comprises at least 4 fragments having a size greater than 1 kb, and wherein said plurality comprises at least 4 fragments having a size less than 1 kb.

120. (Previously presented) The nucleic acid ladder of claim 105, wherein said plurality comprises at least 5 fragments having a size greater than 1 kb, and wherein said plurality comprises at least 5 fragments having a size less than 1 kb.

121. (Currently amended) The nucleic acid ladder of claim 105, wherein said ~~detectable label is ethidium bromide~~ ladder is stained with a detectable label.

122. (Currently amended) The nucleic acid ladder of claim ~~105~~ 121, wherein said detectable label is SYBR green.

123. (Currently amended) The nucleic acid ladder of claim ~~105~~ 121, ~~further comprising a dye~~ wherein said detectable label is ethidium bromide.

124. (Currently amended) The nucleic acid ladder of claim 123, ~~wherein said dye is selected from the group consisting of bromophenol blue, xylene green, and mixtures thereof~~ further comprising a dye.

125. (Canceled)

126. (Currently amended) The nucleic acid ladder of claim 85, wherein the substantially equal relative mass of each fragment size of said plurality is no more than 2.5 times the substantially equal relative mass of any other fragment size of said plurality.

127. (Currently amended) The nucleic acid ladder of claim 85, wherein the substantially equal relative mass of each fragment of said plurality is no more than 2 times the substantially equal relative mass of any other fragment of said plurality.

128. (Canceled)

129. (Canceled)

130. (Previously presented) The nucleic acid ladder of claim 65, wherein each fragment of said plurality exhibits an intensity no more than 3 times the intensity of any other fragment of said plurality.

131. (Previously presented) The nucleic acid ladder of claim 65, wherein each fragment of said plurality exhibits an intensity no more than 2.5 times the intensity of any other fragment of said plurality.

132. (Previously presented) The nucleic acid ladder of claim 65, wherein each fragment of said plurality exhibits an intensity no more than 2 times the intensity of any other fragment of said plurality.

133. (Previously presented) The nucleic acid ladder of claim 65, wherein each fragment of said plurality exhibits an intensity no more than 1.5 times the intensity of any other fragment of said plurality.

134. (Canceled)

135. (Previously presented) The nucleic acid ladder of claim 105, wherein the copy number of each fragment of said plurality is such that the mass of each fragment is no more than 3 times the mass of any other fragment of said plurality.

136. (Previously presented) The nucleic acid ladder of claim 105, wherein the copy number of each fragment of said plurality is such that the mass of each fragment is no more than 2.5 times the mass of any other fragment of said plurality.

137. (Previously presented) The nucleic acid ladder of claim 105, wherein the copy number of each fragment of said plurality is such that the mass of each fragment is no more than 2 times the mass of any other fragment of said plurality.

138. (Previously presented) The nucleic acid ladder of claim 105, wherein the copy number of each fragment of said plurality is such that the mass of each fragment is no more than 1.5 times the mass of any other fragment of said plurality.

139. (Previously presented) The nucleic acid ladder of claim 105, wherein the copy number of each fragment of said plurality is such that the mass of each fragment of said plurality is about the same.